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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|--------------------------------------|-------------|----------------------|---------------------|------------------|
| 10/811,808 | 03/30/2004 | Seung Wan Chae | 2336-257 | 2845 |
| 22429 | 7590 | 08/18/2005 | EXAMINER | |
| LOWE HAUPTMAN GILMAN AND BERNER, LLP | | | LOUIE, WAI SING | |
| 1700 DIAGONAL ROAD | | | ART UNIT | |
| SUITE 300 /310 | | | PAPER NUMBER | |
| ALEXANDRIA, VA 22314 | | | 2814 | |

DATE MAILED: 08/18/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/811,808

Applicant(s)

CHAE ET AL.

Examiner

Wai-Sing Louie

Art Unit

2814

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 03 June 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-14 is/are pending in the application.
- 4a) Of the above claim(s) 6-14 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-5 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date <u>3/04</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Applicant elects Group I, claims 1-5 drawn to a GaN-based semiconductor light-emitting device with traverse. The applicant argues that there would be no serious burden in examining both groups. However, Group I is drawn to a GaN-based semiconductor light-emitting device and Group II is drawn to a method for manufacturing the device. The Inventions Group I and Group II are related as process of making and product made and the inventions Group I and Group II belong to different classes, which require separate searches and considerations. The separate searches and considerations for each group would provide a burden on the examiner. As such, the restriction is proper and the restriction is final. It is suggested that non-elected claims 6-14 be canceled in the response to this Office Action.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 1-5 are rejected under 35 U.S.C. 102(e) as being anticipated by Hata et al. (US 6,649,942).

With regard to claim 1, Hata et al. disclose a nitride-based semiconductor light-emitting device (col. 6, line 1 to col. 27, line 47 and fig. 1) comprising:

- A substrate on which a GaN-based semiconductor material is grown (col. 6, line 9 and fig. 1);
- A lower clad layer 4 formed on the substrate 1, and made of a first conductive GaN material (col. 6, lines 9-12 and fig. 1);
- An active layer formed on a designated portion of the lower clad layer 4 and made of an undoped GaN semiconductor material (col. 6, lines 17-25 and fig. 1-2);
- An upper clad layer 7 formed on the active layer 5, and made of a second conductive GaN semiconductor material (col. 6, line 29 and fig. 1);
- An alloy layer 10a formed on the upper clad layer 7, and made of an alloy selected from the group consisting of La-based alloy and Ni-based alloy (col. 25, lines 46-61);
- A transparent conduct oxide layer 10b formed on the alloy layer 10a (col. 26, lines 1-10 and fig. 1).

With regard to claim 2, Hata et al. disclose the thickness of the alloy layer 10a is 2 nm (col. 6, lines 51-52).

With regard to claim 3, Hata et al. disclose the La-based alloy is LaNi_5 (col. 25, line 53).

With regard to claim 4, Hata et al. disclose the Ni-based alloy is MgNi (col. 25, line 52).

With regard to claim 5, the transparent conduct oxide layer 10b is ITO (col. 26, line 9).

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Wai-Sing Louie whose telephone number is (571) 272-1709. The examiner can normally be reached on 7:30 AM to 4:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Wael Fahmy can be reached on (571) 272-1705. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Wsl
August 11, 2005.

